

**CLAIMS :-**

1. A printhead assembly for an inkjet printer, the printhead assembly comprising:
  - a support member for mounting the printhead assembly within an inkjet printer, and,
  - a plurality of printhead modules mounted to the support member;
- 5 the support member has an overall coefficient of thermal expansion such that it changes its dimensions between its production temperature, when the printhead is assembled, and an operation temperature reached during normal operation of the printer; wherein,
  - the printhead modules are mounted to the support member at the production
  - 10 temperature such that they align when the printhead assembly is at the operating temperature.
2. A printhead assembly according to claim 1 wherein the support member is a beam and the printhead modules include MEMS manufactured chips having at least one fiducial on each;
- 15 wherein,
  - the fiducials are used to misalign the printhead modules by a distance calculated from:
    - i) the difference between the coefficient of thermal expansion of the beam and the printhead chips;
    - 20 ii) the spacing of the printhead chips along the beam; and,
    - iii) the difference between the production temperature and the operating temperature.

3. A printhead assembly according to claim 2 wherein the first component of the beam is an outer metal shell, and the second component of the beam is a core of silicon with the outer metal shell.
4. A printhead assembly according to claim 3 wherein the beam is adapted to allow limited relative movement between the silicon core and the metal shell.
5. A printhead assembly according to claim 4 wherein the beam includes an elastomeric layer interposed between the silicon core and metal shell.
6. A printhead assembly according to claim 3 wherein the outer shell is formed from laminated layers of at least two different metals.
- 10 7. A printhead assembly according to claim 1 wherein the printhead is a pagewidth printhead for printing across the width of a page simultaneously.